NOvA Experiment Status

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All Experimenter's Meeting, October 14, 2013
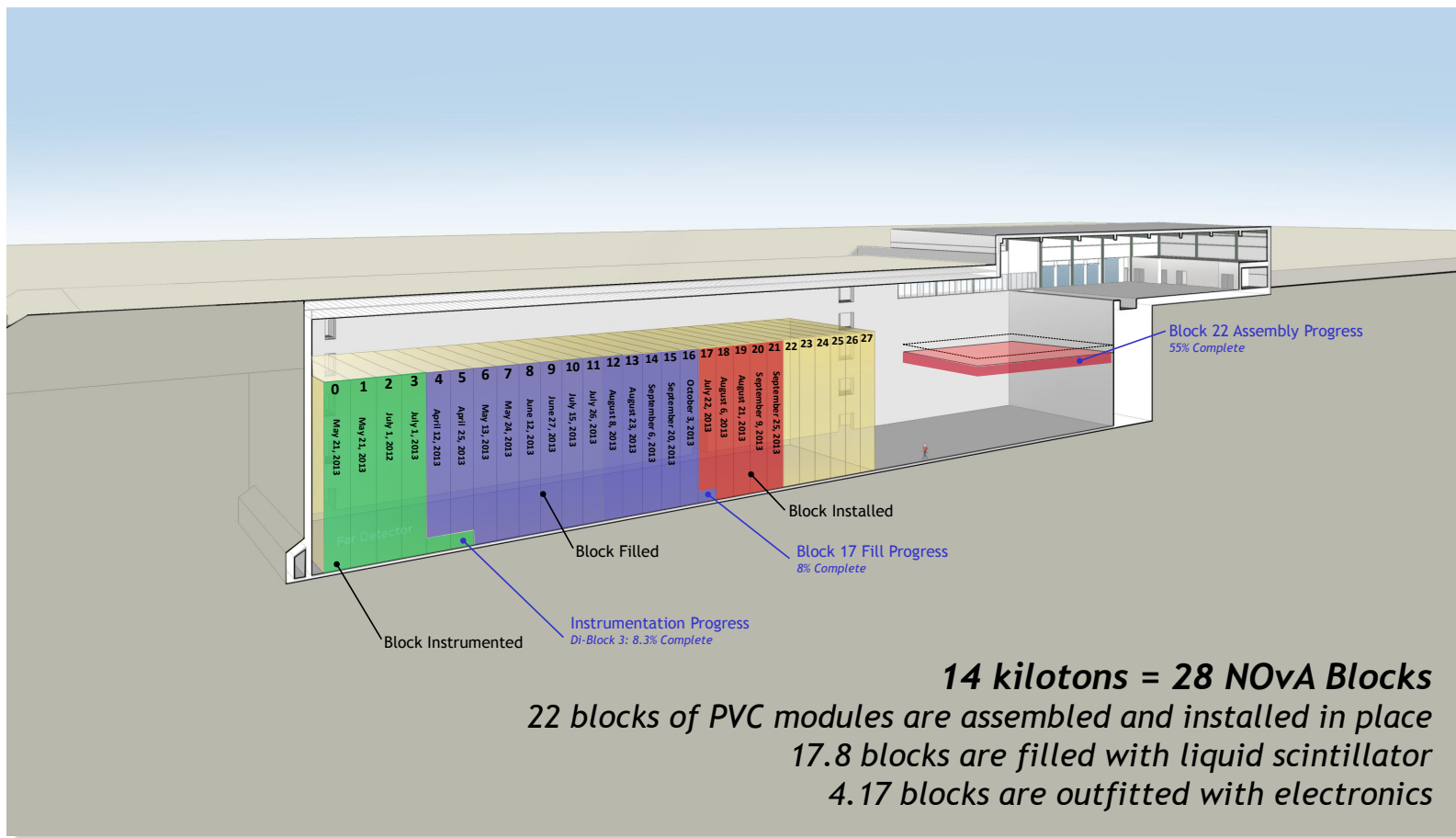
Far Detector Progress

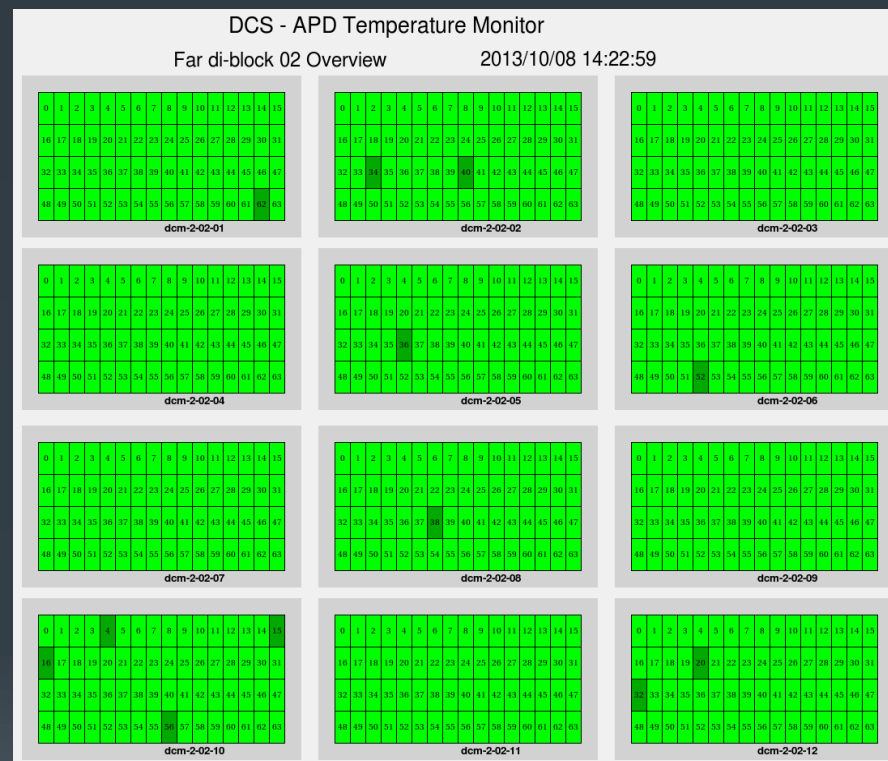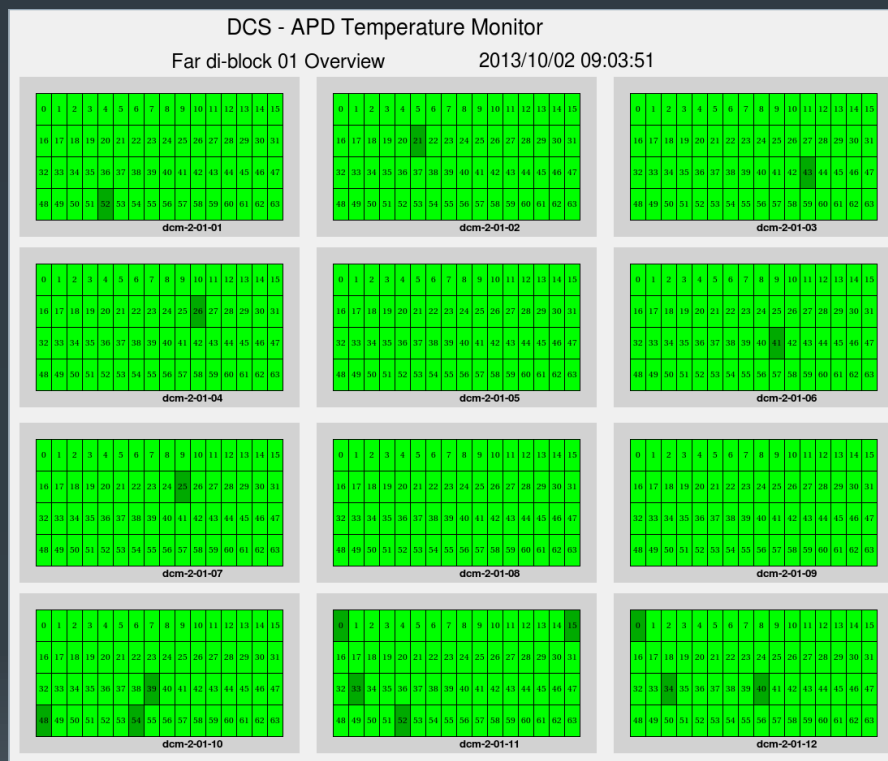NOvA Far Detector Assembly Progress
Status Date: 07OCT13

The Intensity Frontier

Block 22 Assembly Progress
55% Complete

Block Installed

Block Filled

Block 17 Fill Progress
8% Complete

Instrumentation Progress
Di-Block 3: 8.3% Complete

Block Instrumented

14 kilotons = 28 NOvA Blocks
22 blocks of PVC modules are assembled and installed in place
17.8 blocks are filled with liquid scintillator
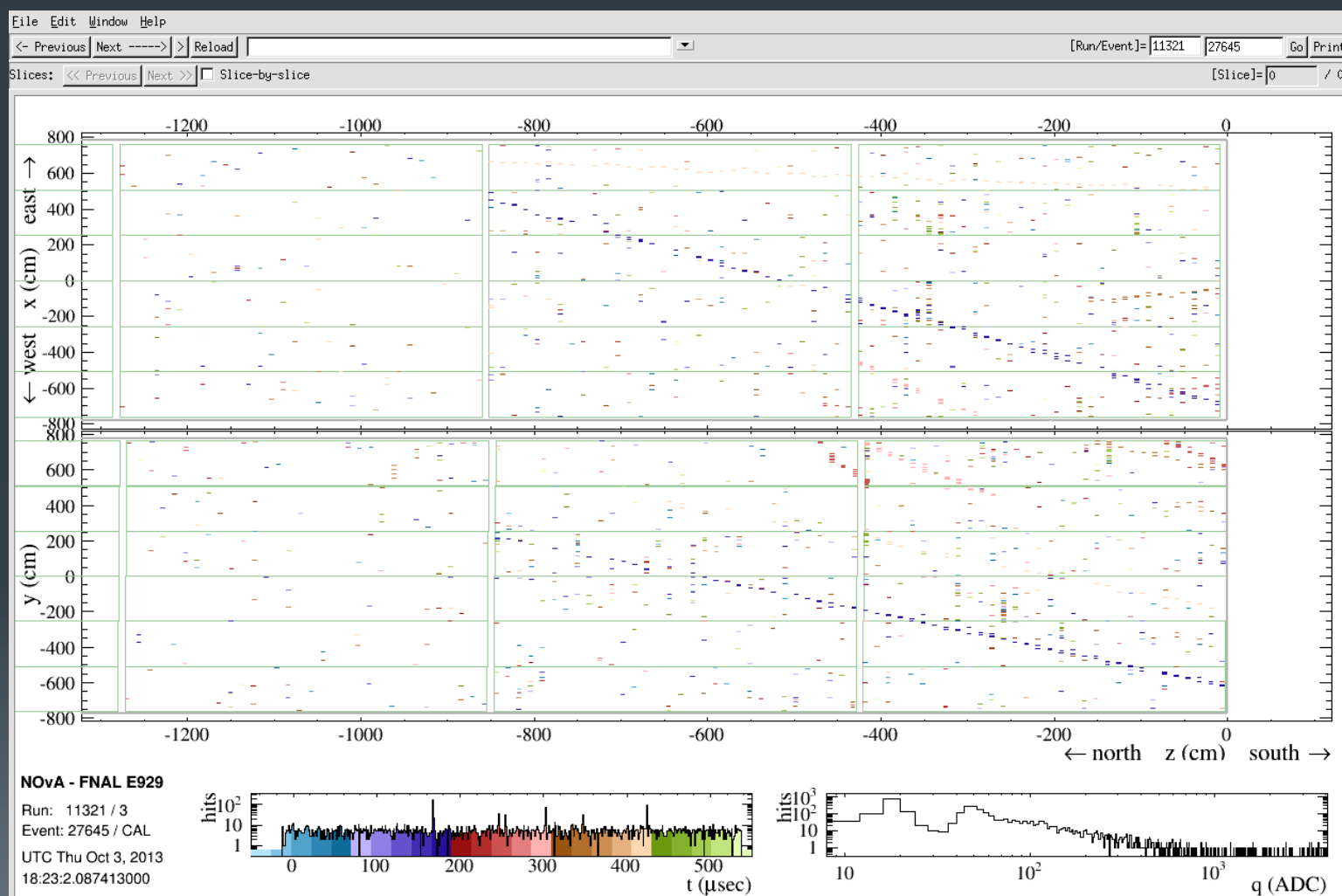*4.17 blocks are outfitted with electronics*

S. Dixon

FarDet APD Cooling

Diblock 01 - Cooling enabled
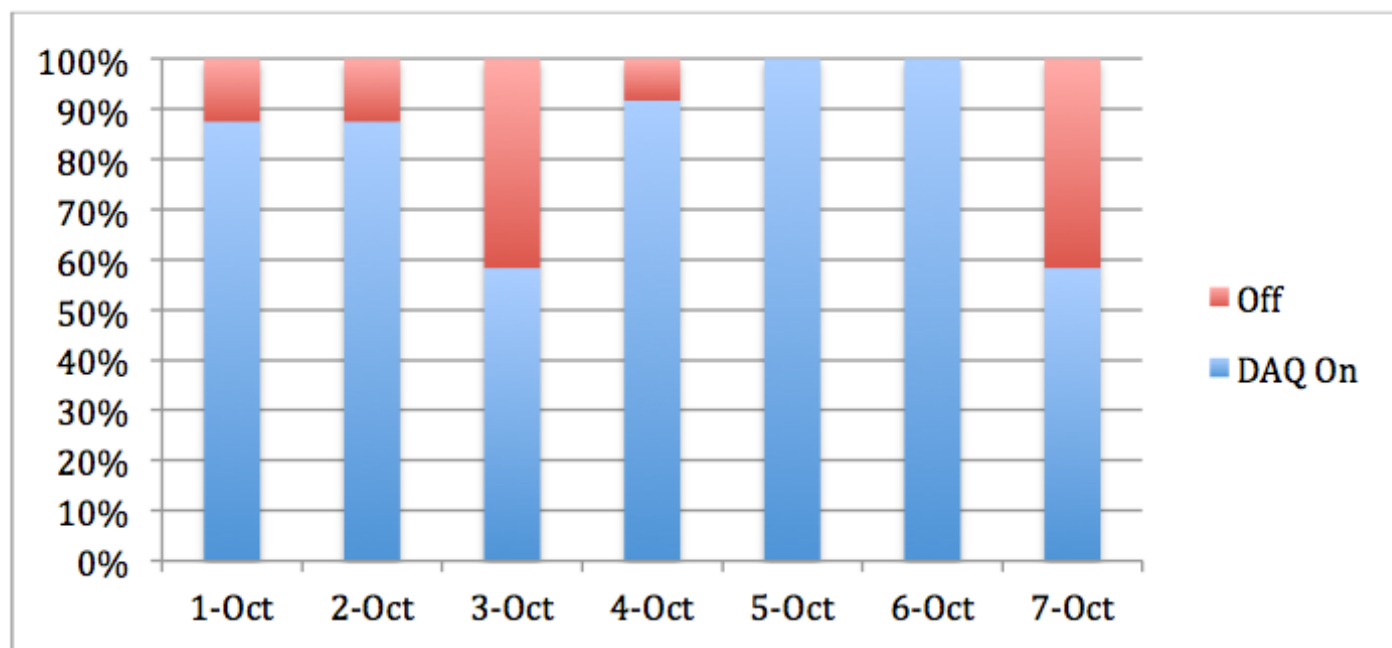Light green – cooled
Dark green – warm

Shown by Data Concentrator Module (DCM)
64 FEBs/APDs per DCM
2048 channels per DCM

Events with APD Cooling On

Diblocks 1,2 cooled and with HV set for gain=100 on all APDs

FarDet UpTime

Tues-Wed 01-02 Oct – 1st try cooling overnight

Wed 02 Oct – start cooling diblock 02 (gain=100 - 30V)

Thurs 3 Oct – work on detector at AR

Fri 04 Oct – Diblock 2 cooling HV set at gain=100

Fri-Mon 04-07 Oct – steady running with 2 diblocks at nominal gain

Mon 07 Oct – work on detector at AR

3rd Block installed at Near Detector

NDUG Outfitting

- Power Distribution Boxes and Data Concentrator Modules installed
- Testing for leaks after block transport/installation
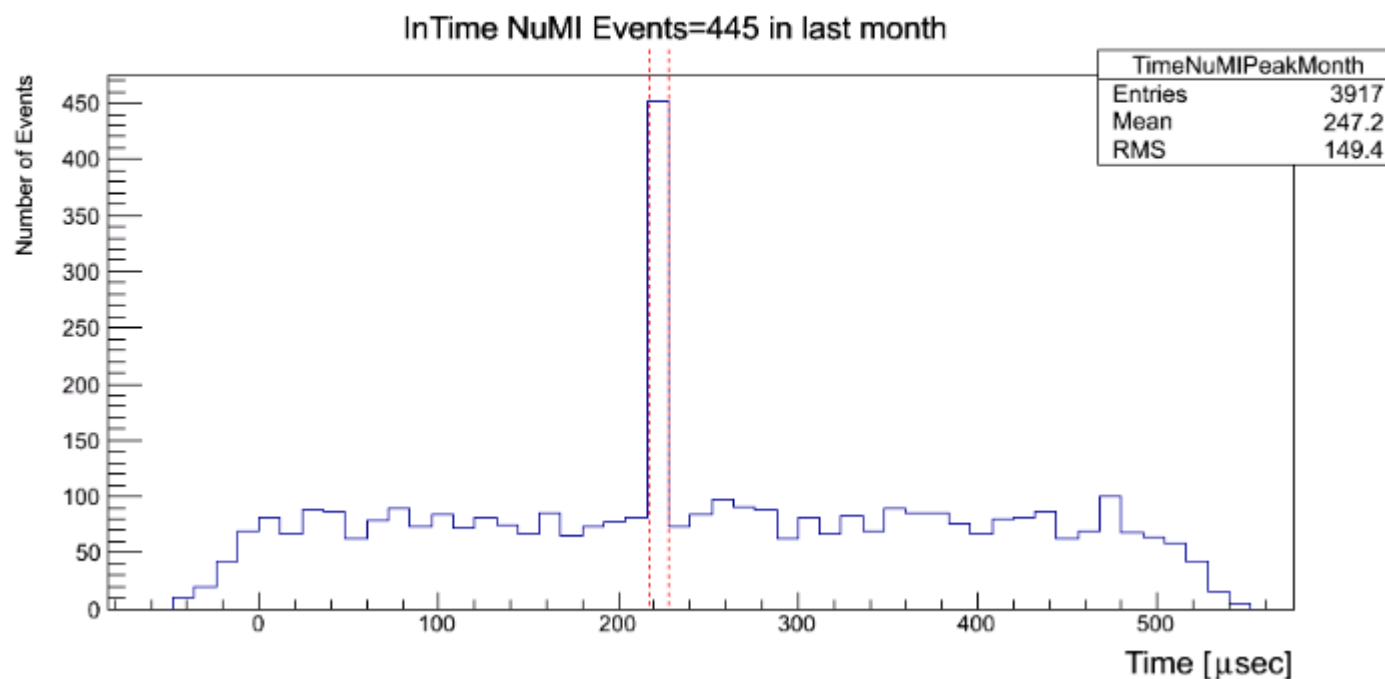
Near Detector Schedule

News and Weekly Schedule

- Block #3: *as-build survey Monday*
- Block #4:

  Monday: assembly complete;

  Tuesday/Wednesday: transfer;

  Wednesday/Thursday: module position survey;

  Thursday/Friday: installation

- Block #5: *Oct 16 – 30 assembly*
- pORC for electronics unattended operation *–Ralf's photos to ORC committee*
- DCS readout plan using PLC – iFIX
- We have a plan for scintillator delivery
- Started to plan DAQ readout and commissioning details
- Expert "Training" at Ash River – Oct 31 – Nov 1

  You are encouraged to attend!

NUMI Beam Timing in NDOS

NDOS Timing Peak for last month

InTime NuMI Events=445 in last month

TimeNuMIPeakMonth	
Entries	3917
Mean	247.2
RMS	149.4

Number of Events

Time [μsec]

- NOvA prototype detector still running continuously
- Useful for beam timing measurements, FarDet prediction
- Test Stand (30 APDs) used to study APD noise rates

Summary

- Continue to take data at Far Detector
  - 2 kilotons with full electronics (warm APDs at nominal gains)
  - Total of 8 kilotons with scintillator, Front-end boards
- 2 ktons of FarDet running cooled at nominal gain
- Near Detector installation continuing
  - 3rd Block installed, 4th Block this week.
- NUMI beam seen in NDOS
  - Continuing to monitor with beam